INTRODUCTION

Lower segmental Caesarean section (LSCS) is an operation performed to deliver the baby through the mother's abdomen and is considered as one of the oldest type of surgical procedure. Following caesarean section, mother may experience pain, confusion. For a period of several days, mothers may also experience constipation, which causes pain and discomfort in and around the abdominal trembling and drowsiness area. The relief of the pain and suffering is a major clinical problem faced in nursing practice too. The technological advancement in health care, routine analgesic procedures in post-operative pain control remain inadequate and thus require complementary therapies and interventions. Reflexology is extremely comforting for a mother recovering from a caesarean section. Sessions during the first week after a caesarean is aimed at helping in pain management, improving bowel functions, as well as reduction in swelling and fluid retention. Due to this pain relieving effect of foot reflexology, this can be utilized among post caesarean mothers, resulting in rapid relief from pain and discomfort after the caesarean section.

NEED FOR THE STUDY

Pain is a complex, multifaceted phenomenon. Pain varies among individual with a unique subjective experience that may be difficult to describe or explain and often difficult for others to recognize, understand and assess. Acute and unrelieved pain can cause physical and mental complications, delayed recovery and prolonged hospitalization. Caring is nursing and nursing is caring. The relief of pain is always a matter of priority for nursing action. Pain relief measures in nursing care includes providing psychological support, maintenance of comfortable position, providing relaxation therapy, music therapy, guided imagery, aroma therapy, therapeutic touch, etc. (**Leiniger. 2011**).

Post-operative pain and quality of sleep are routinely controlled by pharmacological measure alone. Complementary strategies based on sound research

findings are needed to aid in post-operative pain relief and improve quality of sleep. An article published by **kneaded bodyworks wellness center** explained that, regular foot reflexology for post-cesarean mothers can relieve the stress of delivery by facilitating recovery of the postpartum woman and providing emotional support for the transition into motherhood who are recuperating from major abdominal surgery, as well as the strain of pregnancy. Massaging the feet and hands stimulates the mechanoreceptors that activate the "non-painful" nerve fibers, preventing pain transmission from reaching consciousness and induce sleep (**Teresa of Avila. 2012**).

A study was conducted to assess the post-caesarean discomfort other than pain, as a neglected feature of postnatal care. Patients were asked to identify and report discomfort at each time in postnatal unit and re-interviewed after 24 hours. Among these 431 patients, 93 patients expressed various discomforts of which one is stress. Almost one-fourth of patients' who had undergone caesarean section suffered from post-operative discomfort accompanying pain (**Netshandama. 2011**)

The investigator as a midwife during her clinical practice period has come across many women suffering from agonizing pain and discomfort during post caesarean section while feeding the baby, along with nausea and vomiting due to the effects of analgesics, and pain while moving and/or walking. On investigating, it was found by the investigator that majority of the women feel major complaints of pain reduced after administration of non-pharmacological pain relief strategies along with pharmacological measures. Intensive literature reviews and studies explained that Foot Reflexology will be of much benefit in relieving pain and promote comfort to women who have undergone caesarean section.

STATEMENT OF PROBLEM

A Quasi experimental study to assess the effectiveness of foot reflexology on post-operative pain and discomfort among caesarean mothers in CMCHRC at Tiruchirapalli.

OBJECTIVES OF THE STUDY

1. To assess the Pretest level of post-operative pain and discomfort among caesarean mothers.
2. To determine the effectiveness of foot reflexology on post-operative pain and discomfort among caesarean mothers in experimental group.
3. To correlate the pretest and post-operative level of Pain and Discomfort among caesarean mothers in the experimental group and control group respectively.
4. To associate the Post Test level of post-operative Pain with their selected demographic and maternal variables among caesarean mothers in experimental group and control group.
5. To associate Post Test level of post-operative Discomfort with their selected demographic and maternal variables among caesarean mothers in experimental group and control group.
6. To identify the opinion of caesarean mothers with regard to the acceptance of foot reflexology**.**

HYPOTHESIS

H1: There is a significant difference between the pretest and Post Test pain score and discomfort score in experimental group.

H2: There is a significant correlation between the pretest and Post Test level of pain and discomfort among experimental group and control group respectively.

H3: There is a significant association between the Post Test level of post-operative pain with their selected demographic and maternal variables among caesarean mothers in experimental group and control group.

H4: There is a significant association between the Post test level of post-operative discomfort with their selected demographic and maternal variables among caesarean mothers in experimental group and control group.

RESEARCH APPROACH

The research approach used in the study was quantitative research approach.

RESEARCH DESIGN

Quasi experimental group design was adopted for this study.

Experimental Group

(N=150)

O1 X O2

Control group (N=150) O1 - O2

Key:-

O1 - Pretest assessment of pain and discomfort.

X - Application of foot reflexology.

O2 - Post Test assessment of pain and discomfort.

VARIABLES

Independent variable: Foot reflexology

Dependent variable: Post-operative pain and discomfort of caesarean mothers

Extraneous variables

Age, Education, Occupation, Religion, Type of family, Number of children, Parity, History of previous caesarean section, Use of pain killer and Use of any adjuvant therapy for relieving pain.

SETTING OF THE STUDY

The study setting for this study was Chennai medical college hospital and research center (CMCHRC) at Tiruchirapalli.

POPULATION

The target population of this study were the first and second post-operative day caesarean mothers who had delivered in Chennai medical college hospital and research center at Tiruchirapalli.

SAMPLE

The sample was first and second post-operative day of caesarean mothers who had delivered in Chennai medical college hospital and research center at Tiruchirapalli and fulfilled the inclusion criteria and were available at the time of data collection.

SAMPLE SIZE

The sample size was 300.

SAMPLING TECHNIQUE

Purposive sampling technique was adopted to conduct the study.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria:

The post operative caesarean mothers who:

- Were between the age group of 20-35 years.
- were delivered in Chennai medical college hospital and research center at Tiruchirapalli.
- were willing to participate in the study.

Exclusive criteria

The post operative caesarean mothers who

- had post partum complications.
- had undergone high risk condition.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

After extensive research and review of literature, the researcher selected the following tools which was found to be appropriate. It consists of four sections,

SECTION A: Socio-demographic and maternal variables

SECTION B: Numerical Pain Rating Scale

SECTION C: Discomfort Rating Scale

SECTION D: Patient Satisfaction Questionnaire

VALIDITY

The tools were evaluated by 5 experts who were requested to give their valuable suggestion about the content areas, relevance, clarity and appropriate need of items. All the suggestions given by the experts were incorporated in the final preparation of the tool.

RELIABILITY

The reliability of the tools were established by assessing the quality and adequacy of the tool using split half method, and were found to be reliable.

PILOT STUDY

The pilot study was conducted at SVMCH- Pondicherry, after obtaining formal administrative approval. The pilot study was carried out with 30 post-operative caesarean mothers who were delivered in Sri venkateshwara medical college hospital and research center at Tiruchirapalli. There was no modification done in the study and the pilot study samples were excluded from the main sample for the data collection. The data collection feasible and it consumed approximately 30 minutes of intervention for each foot.

ETHICAL CONSIDERATION

The research proposal was approved by the dissertation committee of the institution. Prior to pilot study, permission was obtained from the head of the Maternal Health Nursing department and Director of Chennai Medical College Hospital and Research Center at Tiruchirapalli. A written and oral consent was obtained from each participant who was willing to participate in the study prior to data collection. Assurance was given to the subject that confidentiality was maintained throughout the study. The participants had the freedom to withdraw from the study at any time.

CHAPTER- IV

ANALYSIS AND INTERPRETATION OF DATA

Table -1 Frequency and percentage distribution of Post Test level of postoperative Pain among caesarean mothers in the experimental group and control group. N = 300 (150+150)

POST OPERATIVE PAIN	No Pain		Mild Pain		Moderate Pain		Severe Pain		Worst Pain	
	No.	%	No.	%	No.	%	No.	%	No.	%
Experimental group	0	0	137	91.33	13	8.67	0	0	0	0
Control group	0	0	0	0	0	0	3	2.0	147	98.0

The table -2 depicts that in the Post Test, most of the caesarean mothers in the **experimental group** 137(91.33%) had experienced mild Pain and 13(8.67%) experienced moderate Pain of post-operative Pain. We can also note that most of the caesarean mothers in the **control group** 147(98.0%) had experienced Worst Pain**,** 3(2.0%) experienced severe Pain of postoperative Pain.

Table -4 Effectiveness of foot reflexology on post-operative Pain among caesarean mothers in experimental group. N = 150

Pain	Mean	S.D	Mean Difference & %	Paired "t" test value
Pretest	10.0	0.00	6.99 (69.9%)	**213.33**
Post Test	3.01	0.40		**P = 0.0001, S*****

*****p<0.001, S – Significant**

Table -4 (c) describes the effectiveness of mean scores between pretest and Post Test level of post-operative Pain. The Post Test – post operative pain (03.01) was lower than the mean pretest – post operative pain (10.0)with standard deviation (0.40) and obtained "t" value (t=213.33)was significant at <0.001. Here foot reflexology was effective to reduce pain. Hence, the stated research hypotheses HI were accepted.

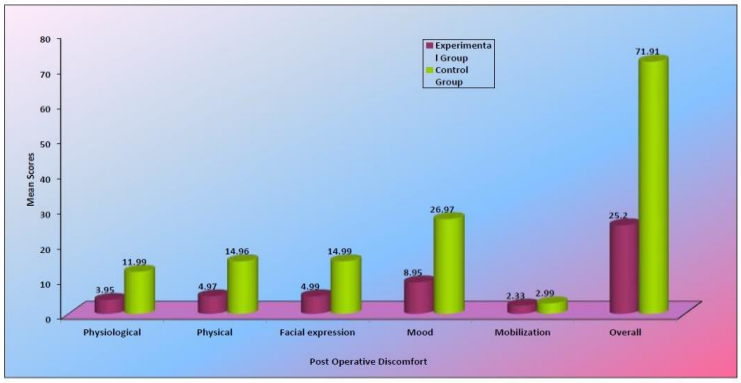

Figure 4.9. Comparison of Post Test level of post-operative discomfort among caesarean mothers between experimental and control group.

Figure -1. Comparison of Post Test level of post-operative discomfort among caesarean mothers between experimental and control group.

Table -5: Association of Post Test score of post-operative pain among caesarean mothers with their selected demographic variables in the experimental group.

Table -5 describes the association of Post Test level of post-operative pain among caesarean mothers with their selected demographic variables in the experimental group. One way ANOVA value/ unpaired 't' value is lesser than the table value at p<0.01 level. Hence, the stated hypothesis H6 was rejected. Significant association was not found between the post level of post-operative pain and selected demographic variables in the experimental group. All variables were independent variable on the Post Test post-operative pain in experimental group.

Table -6 Association of Post Test score of post-operative pain among caesarean mothers with their selected demographic variables in the control group.

N = 150

The table -6 describes the association of Post Test score of post-operative pain among caesarean mothers with their selected demographic variables in the control group. The one way ANOVA / unpaired 't' test value is lesser than the table value at p < 0.001 level. Significant association was not found between the Post Test level of postoperative pain and the selected demographic variables with regard maternal variables of post-operative caesarean mothers. Hence, the stated hypothesis H7 was rejected. All variables were independent variables on the Post Test post-operative pain in control group.

Table -7 Frequency and percentage distribution of level of satisfaction among caesarean mothers in the experimental group. **N = 150**

Patient Satisfaction	No.	%
Unfavourable (0)	0	0
Mildly Favourable (1 – 25%)	0	0
Moderately Favourable (26 – 70)	53	35.33
Favourable (71 – 100)	97	64.67

Table 4.6 (a): Association of Post Test score of post-operative pain among caesarean mothers with their selected demographic variables in the control group.

N = 150

The table 4.6 (a) describes the association of Post Test score of post-operative pain among caesarean mothers with their selected demographic variables in the control group. The one way ANOVA / unpaired 't' test value is lesser than the table value at p < 0.001 level. Significant association was not found between the Post Test level of postoperative pain and the selected demographic variables with regard maternal variables of post-operative caesarean mothers. Hence, the stated hypothesis H7 was rejected. All variables were independent variables on the Post Test post-operative pain in control group.

CHAPTER – V

RESULTS & DISCUSSION

This Chapter presents the interpretation of the statistical findings. It has been discussed based on the objectives of the study. The study was done to evaluate the effectiveness of foot reflexology on post-operative pain and discomfort among caesarean mothers in CMCHRC at Thiruchirapalli. Quasi experimental design was used to conduct the study. The pain and discomfort were assessed by numerical pain rating scale and discomfort rating scale. The satisfactory opinion were obtained by using questionnaire. Non probability convenience sampling technique was used. The study sample consisted of 300 caesarean mothers between the age group of 20-30 years. The Samples were divided into two groups as control group and experimental group. Using the above stated tools, data were collected, grouped and analyzed through descriptive analysis and inferential statistics. The study results revealed the follows.

SECTION A

DESCRIPTION OF THE DEMOGRAPHIC VARIABLES OF THE SUBJECTS

AGE

- Majority of the mother 23 (15%) were in the age group of 20 years in control group and 26 (17.3%) were 25 years in the experimental group.
- Minimum of the mother in age group of 30 years were 4 (2.7%) in control group and 29 years were 2(1.3%) in experimental group.

EDUCATION

- Maximum of mother were graduated 85 (56.7%) in control group and 90 (60.0%) in experimental group.
- Minimum of mother were study upto primary 1(0.7%) in control group and 2(1.3%) of mothers were illiterate in experimental group.

OCCUPATION

- Maximum of mothers were house wife 62 (41.3%) in control group and 52 (34.7%) in experimental group.
- Minimum of mothers were business 5(3.3%) in control group and experimental group 14 (9.3%).

FAMILY INCOME

- Maximum of mothers 86 (57.3%) were family income of > Rs.5, 000 – Rs.10,000 in control group and 81 (54.0%) were in experimental group.
- Minimum of mother family income of < Rs.2, 500 in control group were 4 (2.7%) and 5 (3.3%) were experimental group.

RELIGION

- Maximum of mothers 126 (84%) were Hindu in control group and 121(80.7%) hindu in experimental group.
- Minimum of mothers were Muslim 7 (4.7%) in control group and 12 (8%) in experimental group.

LOCATION:

- Majority of mothers 83 (53.33%) were urban location in control group and 82 (54.7%) were rural location in experimental group.
- Minimum of mother were 67 (44.7%) were rural location in control group and 68 (45.3%) were urban location in experimental group.

TYPE OF FAMILY:

- Majority of mothers belongs to nuclear family 92(61.3%) in control group and experimental group were 82 (55.3%) belongs to nuclear family.
- Minimum of mothers were belongs to joint family in both control group 58(38.7%) and experimental group 68 (44.7%).

DESCRIPTION OF THE MATERNAL VARIABLES OF THE SUBJECTS

TOTAL CHILDREN

- Majority of mothers were have in one child in both control group 98 (65.3%) and experimental group 103 (68.7%).

- Minimum of mothers were having more than two children in both control group 7 (4.7%) and experimental group 6(4%).

SEX OF THE DELIVERY OF THE BABY

- Majority of the mother were having female child in both control group 76(50.7) and experimental group 104 (69.3%).
- Minimum of mother were having male child in both control group 74 (49.3%) and experimental group 46 (30.7%)

PARITY

- Majority of the mothers were primi in both control group 108 (72%) and experimental group 106 (70.7).
- Minimum of the mothers were grand multi in both control group 2 (1.3%) and experimental group 4 (2.7%).

DELIVERY OF THE BABY

- Majority of the mothers were single baby in both control group 137 (91.3%) and experimental group 138(92%).
- Minimum of mothers were multiple baby in both control group 13(8.7%) and experimental group 12(8%)

PREVIOUS CAESAREAN SECTION

- Majority of the mothers were having previous caesarean section in both control group 117 (78%) and experimental group 119 (79.3%).
- Minimum of mothers were having no previous caesarean section in both control group 33 (22%) and experimental group 31(20.7%).

USE OF PAIN KILLER

- Majority of the mothers were using pain killer at 2 times in experimental group 150 (100%) and control group.

USE OF ADJUVANT THERAPY FOR RELIEVING PAIN

- Majority of the mothers were 150 (100%) not having any adjuvant therapy for relieving pain in experimental group.

- Minimum of mothers were 4 (2.7%) were having any adjuvant therapy in control group.

VITAL SIGNS

- Majority of mother 150(100%) were having normal vital signs in both control group and experimental group.

BMI

- Majority of mothers 150 (100%) were having normal BMI in both control group and experimental group.

SECTION B

DESCRIPTION OF PRETEST LEVEL OF POST-OPERATIVE PAIN AND DISCOMFORT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP AND CONTROL GROUP.

The Present study revealed that about 100% of subjects had worst pain before foot reflexology in the first day in both control group and experimental pretest group. The present study revealed that about 100% of the subjects had severe discomfort of continuously occurs during assessment before foot reflexology in the first day of both experimental pretest group and control group.

SECTION C

DESCRIPTION OF EFFECTIVENESS OF FOOT REFLEXOLOGY ON POST-OPERATIVE PAIN AND DISCOMFORT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP AND POST TEST FOR CONTROL GROUP.

The present study revealed that 100% of the subjects had worst pain before foot reflexology in the first day. By identifying this, I planned to apply foot reflexology of them. Whereas there is foot reflexology applied for 30 minutes both leg at twice a day. On the second day the pain level was assessed by using numerical pain rating scale. The mother experience 14 (9.3%) had Severe pain and 136 (90.7%) had moderate pain. These findings were supported by Carlson.C.P.(2015), Stebbenson (2014), Vickters (2013), Eisenberg D.M (2012), Jamileh mokhtani Leiniger (2011).

EFFECTIVENESS OF FOOT REFLEXOLOGY AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP

The Present study showed that the pre test mean discomfort score in first day was (72.0) with SD of (0.00) and the Post Test discomfort score was (26.01) with SD (0.115). There was a significant difference between the pre test and Post Test discomfort score at 0.05 level. It implied that the foot reflexology was effective in reducing post-operative discomfort among caesarean mother.

COMPARISON OF PRE TEST AND POST TEST PAIN SCORES AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP AND CONTROL GROUP.

The present study findings supported that the mean pain score of experimental group during Post Test (3.09) was lower than the mean pain score of control group (5.00). This was out of 10 in the numerical pain rating scale. similar results were also found in the study reviewed, which showed that the mean pain score of experimental Post Test group was (3.09) lower than the pre test group (10.00)

COMPARISON OF PRE TEST AND POST TEST DISCOMFORT SCORE AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP AND CONTROL GROUP

The Present Study findings supported that mean discomfort score of Post Test experimental group was (26.01) lower than the mean discomfort score of control group (71.96). This was measured by using discomfort rating scale. similar result were also found in the study revealed that the mean discomfort score of experimental Post Test group was (26.01) lower than the pre test group (72.00).

SECTION D

CORRELATION BETWEEN PRE TEST LEVEL OF PAIN AND DISCOMFORT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL

GROUP

The present study findings supported that mean pre test pain score (10.0) SD (0.0), pre test discomfort mean (71.91), SD (0.28). Here calculated co relative value (r) cannot be computed. There is no relationship between be pre test level of pain and discomfort in experimental group.

CORRELATION BETWEEN POST TEST LEVEL OF PAIN AND DISCOMFORT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP

At the Post Test level of pain main (3.01), SD (0.40) and Post Test discomfort mean (25.20), SD (0.70). Here Calculated co relative value r = 0.37. The level of Pain and discomfort was decreased there was found be statistical significance P<0.001 level. This infers that level of pain and discomfort decrease it revealed there is an relationship between the Post Test level of pain and discomfort in experimental group.

CORRELATION BETWEEN PRE TEST LEVEL OF PAIN AND DISCOMFORT AMONG CAESAREAN MOTHERS IN CONTROL GROUP

The Present study finding supported that mean pre test pain score (10.0), SD(0.0), The Pre test discomfort means (71.96), SD (0.25) revealed that calculated co-relative value (r) cannot be computer. There is no relationship between the Pretest level of pain and discomfort in control group.

CORRELATION BETWEEN POST TEST LEVEL OF PAIN AND DISCOMFORT AMONG CAESAREAN MOTHERS IN CONTROL GROUP

The Post Test level of pain mean (9.98) SD (0.14), The Post Test discomfort score mean 71.91, SD 0.35 revealed that presence of negative co relation. There was not found be statistically significant. There is no relationship between Post Test level of pain and discomfort in control group.

SECTION E

ASSOCIATION OF POST TEST LEVEL OF POST-OPERATIVE PAIN WITH THEIR SELECTED DEMOGRAPHIC VARIABLES AND MATERNAL VARIABLES AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP AND CONTROL GROUP.

Results of the present study describe the association between demographic variables with regard maternal variables and post-test pot operative pain. One way ANOVA value / unpaired 't' value is lesser than the table value at $p<0.01$ level. Here H6 was rejected. Significant association was not found between the post level of post-operative pain and selected demographic variables with regard maternal variables of post-operative caesarean mothers in experimental group. All variables were independent variable on the post- test post-operative pain in **experimental group**.

The present study describe the association between selected demographic variables with regard post- test post-operative pain. The one way ANOVA / un paired 't' test value is lesser than the table value at $p < 0.001$ level. Significant association was not found between the Post Test level of post-operative pain and the selected demographic variables with regard maternal variables of post-operative caesarean mothers. Here H7 was rejected. All variables were independent variables on the post–test post-operative pain in **control group**.

SECTION F

ASSOCIATION OF POST TEST LEVEL OF POST-OPERATIVE DISCOMFORT WITH THEIR SELECTED DEMOGRAPHIC VARIABLES AND MATERNAL VARIABLES AMONG CAESAREAN MOTHERS IN EXPERIMENTAL GROUP AND CONTROL GROUP.

Results of the present study describe the association between the demographic variables with regard maternal variables and post-operative discomfort. The one way ANOVA/ un paired 't' test value is greater than the table value at 0.01 level in the type of family and parity. Here H6 was accepted. Partially associated to the selected

demographic variables of type family with regard maternal variable of parity in **experimental group**. Other variables are independent on the Post Test discomfort except type of family and parity.

Results of the present study describe the association between demographic variables with regard maternal variables and post-operative discomfort. The one way ANOVA/ un paired 't' test value is greater than the table value at 0.01 level in demographic variables of education, family income, religion, and maternal variables of delivery of the baby, any adjuvant therapy. Other variables were independent variables except education, family income, religion, delivery of the baby, any adjuvant therapy. Here H7 was accepted. Significant association between the Post Test level of post-operative discomfort and the selected demographic variables of education, family income, religion, with regard maternal variables of delivery of the baby, any adjuvant therapy in **control group**.

SECTION G

DISTRIBUTION OF MOTHERS BASED ON THE SATISFACTION IN EXPERIMENTAL GROUP

The present study showed that 100% of post-operative caesarean mothers have no feel anxious during foot reflexology session. 90 (60%) of the mothers reduced post-operative pain. 53 (35.3%) were felt relaxed, 6 (4%) reduced anxious and 1 (0.07%) help them to cope up the situation. And also 100% of the mothers would like to have foot reflexology during their next child birth. 100% of mothers felt freedom form discomfort, felt released, exposure of pleasant after foot reflexology, along with 100% of mothers recommended that foot reflexology an in future.

From this it concluded that foot reflexology was effective, accepted non – pharmacological measure for pain and anxiety, discomfort relief after caesarean section. None of the reviews are mentioning about the satisfaction of the sample in the experimental group.

CHAPTER – VI

SUMMARY, CONCLUSION, LIMITATIONS, IMPLICATION AND RECOMMENDATIONS

Summary of the study

In this Quasi experimental study, the conceptual model was based on general system's theory model. The study was conducted by using one group pretest post test design. The sample size used for the study was 300 caesarean mothers. 300 Samples were divided into two groups as control group and experimental group. Purposive sampling technique was used to select the sample. The instruments used for the data collection were numerical pain rating scale, discomfort rating scale, patient satisfactory opinion questionnaire regarding effectiveness of foot reflexology on post-operative pain and discomfort. The data were analyzed and interpreted in terms of objectives and research hypothesis. Descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (paired 't' test, correlation, co-efficient and chi-square) were used to test the hypothesis.

MAJOR FINDINGS WERE AS FOLLOWS

Regarding percentage distribution of sample according to demographic variables,

- Most of the subjects were is the age of 20 – 25 years in control group & 25 –30 years of age in the experimental group.
- Majority of the mothers were graduated 85(56.7%) in control group and 90 (60%) were in experimental group.
- Maximum of mothers were house wife 62 (41.3%) in control group and 52 (34.7%) were in experimental group.
- Most of their family income was 86 (57.3%) >Rs5,000 in control group and 81(54%) were in experimental group.
- Most of them were the Hindus 126 (84%) in control group and 121 (80.7%) were in experimental group.

- Most of them were living in urban location 83(53.33%) is control group and experiment group 82(54.7%).
- Majority of mothers belonged to nuclear family 92 (61.3%) in the control group and 82 (55.3%) were experimental group.
- Most of them had one child in both control group 98 (65.3%) and experimental group 103 (68.7%).
- Most of mother delivered female child in both control group 76(50.7%) and experimental group 104 (69.3%).
- Majority of mother were primi in control group 108 (72%) and experimental group 106 (70.7%).
- Most of them delivered a single baby in both control group 137 (91.3%) and experimental group 138 (92%).
- Maximum of mothers had previous caesarean section in both control group 117(78%) and experimental group 119 (79.3%).
- All the mothers used pain killer at two times a day is both experimental group and control group 150 (100%).
- Regarding adjuvant therapy all the mothers 150 (100%) in experimental group and 146 (97.3%) in control group had not use adjuvant therapy.
- Regarding vital signs, all the mothers were having normal vital signs 150(100%) and their BMI was normal 150 (100%) in both control group and experimental group.
- In the present study, the level of post-operative pain during the Pretest was increase score “10” (worst pain) 150 (100%) among caesarean mothers in both control and experimental group.
- In the Present study the level of post-operative discomfort during the Pretest was increased (discomfort occurs continuously during assessment) 150 (100%) among caesarean mothers in both control group and experimental group.
- The Paired ‘t’ test shows the experimental post-test pain mean (3.09) was lower than the experimental pre-test pain mean (10.0) with standard deviation (0.28)

and obtained ‘t’ value (t=299.944) was significant at p < 0.001***. Calculated ‘t’ value is greater than the table value at 0.001 level of significance. Here, the null hypothesis is rejected. Thus the foot reflexology has significantly decreased the post-operative pain level on caesarean mothers in experimental group.

- The paired ‘t’ test shows the control group post test pain mean (9.98) was lower than the control group Pretest mean (10.0) with SD (0.14) and obtained ‘t’ value (t = 1.744) was not significant at P<0.001 level. Calculated‘t’ value is lower than the table value at 0.001 level of significance. Hence, the null hypothesis is accepted. The foot reflexology has not applied in the control group. Thus the post-operative pain level has reduced at 0.02 (0.2%) only caesarean mothers felt worst possible pain on post-operative period.
- The student independent ‘t’ test value shows that experimental post test pain mean (3.09) was lower than control group post test pain mean (9.98). Here the control group mothers post-operative pain level is increased 147 (98%) worst pain and 3 (2.0%) was severe pain. There is no manipulation. In experimental group foot reflexology was given 30 minutes at two times a day on I & II postoperative days. Here the post test pain score was reduced 137 (91.33%) mild pain and 13 (8.67%) was moderate pain. The foot reflexology was effective to reduce post-operative pain and discomfort caesarean mothers.
- The paired ‘t’ test shows the mean post test discomfort on experimental group (25.20) was lower than the experimental pretest discomfort (71.91) with SD (0.25) and obtained ‘t’ value (t=1.500) was significant at P<0.001*** level. Calculated ‘t’ value is greater than the table value at 0.001 level of significance. Here the null hypothesis is rejected. Thus the foot reflexology has significantly decreased the post-operative discomfort level on caesarean mothers in experimental group.
- The paired ‘t’ test shows the control group post-operative discomfort mean (71.91) was lower than the control group Pretest discomfort mean (71.96) with SD (0.35) and obtained ‘t’ value (t= 2.577) was not significant at P<0.001 level.

calculated ‘t’ value is lower than the table value at 0.001 level of significance. Hence, the null hypothesis is accepted. The foot reflexology has not applied in the control group. Thus the post-operative discomfort level has decreased at 0.05 (0.07%) only. The caesarean mothers felt discomfort continuously during assessment.

- The student independent ‘t’ test value shows that experimental post test discomfort mean (25.20) was lower than the control group post test discomfort mean (71.91) with mean difference of 46.71 (62.28%). Here, Control group mothers not got the reflexology. Experimental group mothers got foot reflexology for both leg at 30 minutes on I & II post-operative day. Here the discomfort score was reduced 25.20 (62.3%). The reflexology was effective to reduce post-operative discomfort among caesarean mothers.
- In this study, the post test level of pain mean (3.01) with SD (0.40) and post test discomfort mean (25.20) with SD (0.70). Here calculated co relative value r = 0.37. The level of pain and discomfort was decreased. There was found be statistical significance $P<0.001$ level. This infers that level of pain and discomfort decrease, it revealed there is a relationship between the post test level of pain and discomfort in experimental group.
- Significant association was found between the post-test post-operative discomfort and selected demographic variables of type of family with regard maternal variables of parity in experimental group. Other variables such as age, education, occupation, family income, religion, location, total children, sex of the baby, delivery of the baby, history of previous caesarean section ,use of pain killer, use of any adjuvant therapy for relieving pain, vital signs, BMI are independent, not association with post-test post-operative discomfort in experimental group.
- Significant association between post-operative discomfort demographic variables of education, family income, religion, and maternal variables of delivery of the baby, any adjuvant therapy in control group. Other variables were

independent variables such as age, occupation, type of family, location, total children, sex of the baby, parity, history of previous caesarean section, use of pain killer, vital signs, BMI, there were not significant association with post test post-operative discomfort in control group.

CONCLUSION

The result showed significant-difference between the mean score of pain and discomfort in both experimental and control group before and after administration of foot reflexology. The computer one way ANOVA test showed that there was a significant association between the post test postoperative discomfort score and selected demographic variables with regard maternal variables in both experimental and control group. Over all findings of the study showed that there is effective in reducing the post-operative pain and discomfort among caesarean mothers by means of applying foot reflexology.

IMPLICATIONS FOR NURSING PRACTICE

The finding of the study have several implication on nursing practice, nursing education and nursing administration.

NURSING PRACTICE

The nurse who works in the clinical area can practice foot reflexology for providing care for the mothers who have undergone caesarean section, as it was found to be one of the effective measures in reducing pain and discomfort of the mothers with no side effects.

NURSING EDUCATION

The student nurse will enhanced with knowledge and skill of foot reflexology that can be guided in developing the right attitude and skills required for caring the patients who have undergone caesarean section. Continuing education is the key component and a vital role in the field of the nursing profession.

NURSING ADMINISTRATION

A separate health education department can be organized which can player a major role in educating the mothers. They should arrange for mass health education campaign using foot reflexology content.

NURSING RESEARCH

There is a great need for extended and intensive research in the different areas of complementary therapies for post natal mothers to improved their comfort and wellbeing.

LIMITATION

- The study was limited to only small sample size (300), which restricts the generalization of findings.
- Foot reflexology was limited to two days therapy for each patient.
- There was no control on certain extraneous variables like source of information after the pre-test.
- The post-operative care mothers were not randomly assigned. Hence the convenience sampling restricts the generalization.
- The study was done in hospital set up only.

RECOMMENDATION

1. The study could be replicated on layer samples.
2. A similar study can be conducted for a long duration of time which may yield more reliable results.
3. A comparative study can be conducted between foot reflexology and pharmacological measures.
4. A comparative study can be conducted between foot reflexology and other complementary therapies like acupressure, acupuncture, infra-red therapy and music therapy.
5. A study can be conducted on the effectiveness of foot reflexology on pain and discomfort of women during menstruation period.

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